

Natural Philosophy

Reviewed by Lesley Payne

Natural Philosophy: A Survey of Physics and Western Thought. By Dr. David W. Snoke

During my stint teaching high school biology last year, while searching for materials to present alternatives to Darwinian evolutionary theory, I discovered the Action Research Network (www.arn.org), a group of university professors and affiliates who are part of the Intelligent Design movement, taking the position that reason and scientific evidence point to an intelligent creator behind complex biological systems. I showed my students a wonderful video from ARN, *Icons of Evolution*, which pointed out several flaws in the traditional presentation of evolution to high school students (such as the embryo drawings they always put in biology textbooks, even though they were proven to be fakes a long time ago).

I was excited to see on the ARN web site that the group would be publishing a high school science text that integrates philosophy and science, *Natural Philosophy: A Survey of Physics and Western Thought* by University of Pittsburgh physics professor David Snoke (who is also a Presbyterian minister and homeschooling father). As soon as it was available, I requested a review copy.

When the book arrived, my 15-year-old son and I sat down eagerly to read it. We thumbed through it and it looked great. The book continued the long tradition of treating physics (or science in general) as a branch of philosophy. Each chapter had some physics, some math, some philosophy and some theology. The physics and math were rather advanced, but I could handle that. Chapter one introduced philosophical ideas about how we can know anything and tied it in with the scientific method. Dr.

Snoke seemed to have a balanced outlook—not giving too much authority to fallible scientific ideas, but not saying that a theory has to be “proven” beyond a reasonable doubt before people can ascribe to it.

I felt the book could have used better organization and layout, but then again homeschoolers don’t need all the visual stimulation of a fancy textbook. I also thought it odd that the book would include things that I thought were too basic for the audience (i.e., a section on how to plot graphs), and then jump to something I felt too complicated (i.e., deriving the equation for relativistic time dilation). But, again, homeschoolers are great at deciding which parts of a text to tackle and which to pass up.

We hit some snags in the first chapter, though, when Dr. Snoke stated that St. Thomas Aquinas taught that faith is a thing humans do to earn God’s favor. This resulted in an unscheduled religion lesson, consulting the *Catechism of the Catholic Church* for clarification of the Church’s teaching on faith and a little internet research to find out what the Angelic Doctor really taught on the subject (Dr. Snoke had mis-stated Aquinas’ teaching).

Then we got to chapter one’s “Bible Focus” section, discussing the (Protestant) controversy between evidentialism and presuppositionalism. The only vaguely interesting part of this section to me was the fact that C.S. Lewis was a member of one of these schools of thought. I was willing to research Church teachings and the writings of great theologians to counter Dr. Snoke’s theology, but I was not willing to learn all about esoteric Protestant theological arguments which have no bearing on our life as Catholics.

Could we just skip certain sections and

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still benefit from the book? Or was it so imbued with a Protestant worldview that I could not easily pick out the useful information and explain the errors? Could I ignore statements such as: “Historically, the Reformation in Europe aided the development of modern science by removing the superstitions of many people?”

I put the book aside.

What we really need, I thought, was a Catholic study guide to accompany the book, with alternatives to the “Bible Focus” and “Theology Focus” sections and explanations of some of the theological errors contained in the text. I tried to think of someone with expertise in physics, philosophy and theology to write such a study guide (still looking...).

I am still hoping to find someone to write a Catholic study guide for the book, but as an interim measure I will provide a few resources to help “Catholicize” this text. Keep in mind, though, that unless you are a college physics professor with a side interest in Christian philosophy, you will need to do a great deal of preparation before attempting to teach this material. And if you are a physics professor with a philosophy hobby, you could probably find a better physics book and a good Catholic philosophy book and make up your own course as you go along.

Because of the amount of preparation involved, I think this book would best be used for a high school science coop class, taught by a parent (or several parents) with some background in science and philosophy. Ideally, the students would have had some physics, philosophy and advanced math, although interested students could pick up a lot in the context of this course. If I were teaching such a class, I would follow the book’s chronological treatment of physics topics, but would use additional materials and probably take several weeks per chapter.

For example, chapter one covers the sci-

entific method, discussing the philosophy of knowledge in general, faith as a kind of knowledge, and uncertainty in mathematical calculations (significant digits). I would use sections 1.1 through 1.3 as is (discussing knowledge and inductive/deductive reasoning). I would then skip to sections 1.6 through 1.8, discussing myths about the scientific method and Occam’s Razor. I would return to the topic of section 1.4, significant digits, but would add to that sparse section (perhaps using the *Cartoon Guide to Statistics*). I would skip the “Bible Focus” and “Personality Focus” sections (Roger and Francis Bacon). I would also skip the other “Math Focus” sections on functions and graphing (if the students don’t already know this, they are not ready for the material in this book). I might do the “Math Focus” section on negligible quantities, as it ties in with the issues of knowledge and certainty in the rest of the chapter, and it is something that even students who have taken calculus might need to be reminded of. In place of the skipped sections, I would use the *Catechism of the Catholic Church* and quotes from *Fides at Ratio* to give a Catholic definition of faith. I might assign one or two essays from *The Ever-Illuminating Wisdom of St. Thomas Aquinas*, particularly Peter Kreeft’s essay, “When Philosophy and Life are One.” Depending on the students, I might also give a writing assignment (perhaps on some of the personalities mentioned in chapter one—the Bacons, St. Augustine, St. Thomas Aquinas, etc.).

In general, I would skip the sections that are too elementary and too Protestant, would add some Catholic philosophy and history to every chapter, and would incorporate some projects and experiments (I might use one or two of the projects from *Caveman Chemistry*, reviewed previously in these pages, such as making a battery).

Such a class would be time-consuming, but you could count it as time spent studying science, math, history, philoso-

phy, English and religion.

I believe the ability to integrate these subjects is one of the best things about home education. Thus, even though *Natural Philosophy* is far from being a perfect text for Catholic homeschoolers, with a little (well, a lot) of work the book can be a useful tool

in our efforts to give our children not just knowledge, but a well-rounded education.

Order *Natural Philosophy from the Action Research Network* by calling (888-259-7102) or on-line at www.arn.org. Price: \$39.95 plus \$7.99 S&H.

Resources

The History of Western Philosophy by Ralph McInerney, available online on the Jacques Maritain Center web page, www.nd.edu/Departments/Maritain/etext/hwp.htm.

A Brief History of Western Philosophy by Anthony Kenny. Not really that brief, but briefer than the nine-volume *History of Philosophy* by Frederick Copleston, S.J. (written between 1946 and 1974), which is the definitive work.

Oxford Illustrated History of Western Philosophy, ed. Anthony Kenny. Order from Oxford University Press, (800) 445-9714 or on-line at www.oup.com/us.

Hooked on Philosophy: Thomas Aquinas Made Easy by Robert O'Donnell. This accessible little book begins with epistemology (how we know things), which would be a good expansion of chapter one of *Natural Philosophy*. Order from Alba House at (800) 343-2522 or on-line at www.albahouse.com.

Miracles and Physics by Stanley Jaki (priest and physics professor). If your family specializes in science, any of Fr. Jaki's books would be useful. One must-read Jaki essay to go with this book is "The Intelligent Christian's Guide to Scientific Cosmology," included in the volume *Catholic Essays*. Order from Christendom Press at (800) 698-6649 or on-line at www.christendompress.com.

The Restitution of Man: C.S. Lewis and the Case Against Scientism by Michael Aeschliman. I ran across this book on the sale rack at the Daughters of St. Paul while I was working on this review. What a find! The book outlines the views of Lewis (and like-minded people such as Chesterton, Tolkien and other great thinkers) toward the modern error of viewing empirical science as the only valid way to study the world

("scientism"), especially reflected in Lewis' book, *The Abolition of Man*. What's the plan for the restitution of man? Experiencing the most important aspects of our humanity through literature and art (the "humanities"). This is definitely background reading for parents or an assignment for a teenager who plans to study philosophy in college. I'm already working on an article incorporating some of the literature recommended in this book, so stay tuned.

C.S. Lewis for the Third Millennium by Peter Kreeft analyzes *The Abolition of Man* in great detail, showing how much worse off we are now than when Lewis first wrote the book. This is actually a collection of essays and several of them would work with some younger teens. A couple of particular treats: the essay describing how Walker Percy's novel *Lost in the Cosmos* is a humorous literary version of the scholarly *Abolition of Man* (I just moved reading *Lost in the Cosmos* way up on my "to-do" list!) and the explanation of how Lewis' Space Trilogy novels present an ideal, pre-original-sin view of the universe. In the first book of that trilogy, *Out of the Silent Planet*, the hero Ransom has been kidnapped by an evil scientist and is being taken to another planet. As they leave the earth, he feels freed, away from the burden of a fallen creation.

The Cartoon Guide to Physics and *The Cartoon Guide to Statistics*. All of the *Cartoon Guides* are readily available at bookstores and libraries or from www.amazon.com.

Standard Deviants video series (most geared toward advanced high school students and college students, but they have some titles for younger students now). They offer video courses on every conceivable subject. Titles that would

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assist in this course include physics I and II, statistics, philosophy and various math titles (according to the web site, statistics and calculus are their #1 and 2 sellers). Order from Cerebellum at (800) 238-9669 or visit www.standarddeviants.com.

The University of Pennsylvania has an interactive on-line physics textbook, accessible at www.dept.physics.upenn.edu/courses/gladney/mathphys/Contents.html.

Most of the science-related programs from the Discovery Channel and similar places are available as videos. A good starting place is www.school.discovery.com. Under "Teacher Resources," you can search by subject. There are videos on specific topics like motion and forces, or you can tie in programs from Junkyard Wars, Extreme Engineering or similar less science-y programs. Don't forget to check what your public library carries in the way of educational videos.

Cathletics Key Cards

Reviewed by Nancy Carpentier Brown

Have you ever wanted to make flash cards about the Catholic faith? Perhaps you even tried it, trying to help your children remember the mysteries of the rosary, or the names of the books in the Bible. Well, Monica McConkey has come up with a great idea. The Cathletics Key cards are individual laminated "key" cards. Each card has a theme, such as Mysteries of the Faith, the Bible, or Mary, and each card contains the essential items that a child (or adult) should remember. There is a movable flap that you can place over the "answers" so that the child can "test" himself and see if he can remember the points. Sliding the flap aside reveals the answers, and so the child can learn quickly.

Arma Dei has just added five new cards to their collection.

The 18 card topics are: Altar Servers, Angels, Bible, Bible Heroes, Church, Confirmation, Daily Prayers, Foundation Prayers, Holy Communion, Holy Spirit, Mary, Mass, Mysteries of Faith, Patron Saints, Reconciliation, Rosary, Rules to Live By and Vessels & Vestments

Each card is laminated on 8.5 X 3.75 card stock. It is an easy self-teaching tool, and comes in very handy for sacramental preparation, or they would be great prizes or incentives when holding games and activities for young people. They are easy to take along, too, for commuting from activity to activity.

Available from Arma Dei Family Ministry. Cost: \$2.00 per card. Add \$2 S&H for up to eight cards, or \$4 S&H for more than eight cards. Make checks payable to Monica McConkey and send to 116 Booth Drive, Stouffville, Ontario, L4A 4R9, CANADA. 905-642-6414. ArmaDei@aol.com

